

### Ground Hornbills *Bucorvus cafer* and Marabou Storks *Leptoptilos crumeniferus* feeding in association with mammals

Ground Hornbills *Bucorvus cafer* and Marabou Storks *Leptoptilos crumeniferus* occur in Mikumi National Park, Tanzania. General feeding habits of these two species are different. Ground Hornbills spend much of the daytime walking and searching for food on the ground in groups of at least two individuals. Marabou Storks are common scavengers in regions where game and or domestic animals are abundant, or near human settlements at abattoirs, rubbish dumps and fish camps (Kahl 1966). Marabous are also best known for their attendance, along with vultures and hyaenas, at carcasses of large grazing mammals (Kahl 1966, Houston 1980). While it is not unusual to see Marabous catching aquatic animals such as fish and frogs from swamps and pools during periods of low water, they also catch some prey at grass or bush fires (Kahl 1966) when they occur in loose flocks.

However, there appear to be no reports in the literature of Ground Hornbills and Marabous feeding in association with mammals. On several occasions (see Tables 1 and 2), during field work in Mikumi National Park in May 1988, I observed separately Ground Hornbills and Marabous walking amongst foraging groups of large mammals in a manner similar to that of Cattle Egrets *Bulbucus ibis* when taking flushed grasshoppers and other prey. Mammalian species seen associating with the two bird species included Zebras *Equus burchelli*, Warthogs *Phacochoerus aethiopicus*, Giraffes *Giraffa camelopardalis*, Wildebeests *Connochaetus taurinus*, Impalas *Aepyceros melampus* and Yellow Baboons *Papio cynocephalus*.

Birds observed in association with the large mammals were catching prey disturbed by the movements of the mammals.

Various authors have shown that birds associating with mammals in this manner may increase their prey capture rates (Perrins & Birkhead 1983). It is also possible that such associations offer an advantage as an anti-predator mechanism (two Ground Hornbills among mixed groups of Impalas and Wildebeests took flight when the mammals moved off at the approach of a vehicle).

Although I have been unable to find any previous reference in the literature to Ground Hornbills and Marabous feeding in association with large mammals, this feeding habit is well documented for a number of other avian species. Such species include Crowned Cranes *Balearica regulorum* (Pomeroy 1980), Indian House Crows *Corvus splendens* (Tyler 1980) and Yellow Wagtails *Motacilla flava* (Tyler & Ormerod 1986). A complex association of four other species of hornbills with Dwarf Mongoose *Helogale* sp. has been documented by Rasa (1980)

Table 1. Association of Ground Hornbills with large mammals (habitat indicated)

Date/time	Number of birds observed
10 May 1988 (12:00 hrs)	7 birds with mixed groups of Impalas, Warthogs and Yellow Baboons. Open woodland.
12 May 1988 (10:00 hrs)	2 birds with mixed herds of Impalas and Wildebeests. Open woodland.
14 May 1988 (15:45 hrs)	4 birds with a herd of Impalas. Spotted grassland.
15 May 1988 (09:30 hrs)	4 birds with a herd of Wildebeests. Spotted grassland.
18 May 1988 (16.00 hrs)	6 birds with a herd of Zebras (8). Open woodland.

Table 2. Association of Marabou Storks with large mammals (habitat indicated)

Date/time	Number of birds observed
14 May 1988 (15:45 hrs)	6 birds with mixed herds of Impalas, Wildebeests and Zebras. Spotted grassland.
14 May 1988 (16:00 hrs)	5 birds with a heard of Giraffes (6). Spotted grassland.
18 May 1988 (16:00 hrs)	5 birds with Impalas. Spotted grassland.
19 May 1988 (16:30–17:30 hrs)	9 birds with mixed herds of Wildebeests, and Zebras and one male Impala. Spotted grassland.

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### Long life-span and sedentariness of birds in North Nandi Forest, Kenya.

Survival in tropical passerines is known to be relatively high (Fry 1980, Brown & Pomeroy 1984, Urban 1975). Longevities of ten years or more have been recorded for passerines in Malawi (Dowsett 1985, Hanmer 1987, Piper 1987), while a remarkable twenty-year-old Cameroon Sombre Greenbul *Andropadus curvirostris* has been recorded in Kakamega Forest (Zimmermann 1986). A Rufous Thrush *Stizorhina fraseri* was mist-netted by Christine Dranzoa at Erika Forest, Uganda 15 years after it was ringed (C. Dranzoa pers. comm.).

The National Museum of Kenya and the Naturhistorisches Museum, Vienna, undertook joint expeditions to the North Nandi Forest in western Kenya in 1978 and 1979. In